

# **Western Great Basin 2003 Fire Season Overview**

## **Weather and Fuels**

For the fifth year in a row, Nevada entered the fire season with a precipitation deficit. NOAA's U.S. Drought Monitor classified the state as being in varying stages of drought for the entire fire season, with indices ranging from moderate in the west to severe to extreme in the east. Winter temperatures for most of the state averaged 3-4 degrees above normal, while winter rainfall was below normal across the north and near normal in the south; this pattern is characteristic of a weak to moderate El Nino.

Demonstrating the fickle nature of an El Nino event, the spring weather conditions reversed themselves, bringing copious amounts of rainfall to much of the state. Below normal temperatures were recorded through much of April and into early May. This surge in rainfall eased drought conditions across the Great Basin, but only made a bad situation worse as the crop of annual grasses flourished in the cool, wet weather and added significantly to the fine fuel loading observed later in the summer.

The spring conditions of early May quickly gave way to mid-summer like heat and dryness as a persistent ridge of high pressure developed over the Great Basin and remained in place from late May through much of the summer. The combination of heat and low humidity served to accelerate the drying and curing process for all fuels. Live vegetation in central and southern Nevada was showing stress from drought conditions as early as the end of May. The Energy Release Component (ERC) Index and the 1,000-hour fuel values both verified the dry conditions as they exceeded the 97th percentile, and in some cases the 10 year maximum values, in late June and early July.

The strong ridge of high pressure aloft allowed a tremendous amount of heat to build up across the Great Basin, as evidenced by the numerous locations that set records for the warmest July on record. This heat aided in the development of a strong thermal trough across western Nevada, which resulted in a strong northward push of monsoonal moisture. Atypical of a normal Nevada thunderstorm episode, this year's storms moved rapidly north and west, bringing significant wetting rains to most of the state by the end of July. Fire danger fell rapidly with the precipitation onset, even continuing to fall to well below normal readings in several spots. The wet weather pattern prevailed into early August, providing enough moisture so that a widespread green-up of perennial fuels occurred. Fuels slowly dried again in September and October as dry, stable weather spread across the Great Basin.

## **Large Fire Activity**

Initial attack efforts were successful 98% of the time, with only 1.9% of the fires reaching 300+ acres in size.

All but four of the large fires reported in 2003 were lightning caused. The first large fire of the year began June 17<sup>th</sup> on state land just south of Carson City, while another 2 fires occurred around the same period. The bulk of the year's large fires occurred from July 8-23, when lightning activity touched off 6 large fires throughout the state and another 3 human caused fires emerged. For the first time in at least 10 years, no large fires occurred in August. The last large fire of the season was contained on September 22<sup>nd</sup>. By that date, 14 large fires had burned a total of 11,375 acres (all agencies plus private). This compares to an average of 66 large fires

occurring each year from 1998 to 2002. As is generally the case, large fires made up the majority of the total acreage burned; in 2003, large fires accounted for 65% of the total acres burned.

Large fire workload by dispatch center was as follows:

<u>Dispatch Center</u>	<u># of Large Fires</u>	<u># of Acres Burned</u>
Elko Interagency Dispatch Center	5	6,456
Central Nevada Interagency Dispatch Center	2	725
Sierra Front Interagency Dispatch Center	3	3,228
Ely Interagency Communication Center	3	966
Las Vegas Interagency Communication Center	0	0

### **Incident Management Teams**

The total number of Incident Management Team (IMT) assignments within the Western Great Basin Area in 2003 was the lowest since 1997. In all, 2 Type 1 IMTs were ordered and 1 Type 2 (Sierra Front) IMT assignment occurred, but no Type 3 IMTs were assigned within the Area. Both of the Type 1 IMTs were assigned not to a fire, but to the Newcastle incident in Clark County. Although internal IMT assignments were minimal, Nevada members of Martin's and Sexton's Rocky Basin Type 1 IMTs and the Great Basin Type 2 IMTs saw a total of 19 assignments on incidents in the Eastern Great Basin, Southwest, Northern Rockies, Northwest, and Rocky Mountain.

Western Great Basin incidents with Incident Management Teams assigned can be broken down as follows:

<u>Agency</u>	<u># of Large Fires</u>	<u># of Team Assignments</u>
Bureau of Land Management (BLM)	9	0
U.S. Forest Service (USFS)	2	1
Nevada Division of Forestry	1	0

### **Historical Comparison**

One must go back over 20 years to find a season (1982) that correlates to the 2003 fire occurrence statistics, at least in terms of acres burned. Although the number of fires was slightly higher than in 2002, the total acreage burned and number of large fires showed a dramatic reduction. At 817, the total number of fires was 78% of the 5-year average of 1,043 fires, while the total of 17,548 acres burned was 2.5% of the 5-year average of 681,654 acres<sup>1</sup>.

The amount and frequency of dry lightning are critical factors in the severity of Nevada's fire season. Over the last 10 years, 69% of the fires have been lightning caused. For the same period, these fires resulted in 86% of the total acres burned. In 2003, 73% of the fires were lightning caused, resulting in 68% of the total acreage burned. Although these statistics are in keeping with the general trend, the wet thunderstorms experienced during 2003 were the determining factor when it came to limiting fire growth.

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<sup>1</sup> The 2003 occurrence statistics include 6 Wildland Fire Use incidents for a total of 2 acres.